

PATENT ABSTRACTS OF JAPAN(11)Publication number : **55-076040**(43)Date of publication of application : **07.06.1980**

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C22C 29/00**B22F 3/14****C04B 35/58**(21)Application number : **53-149649**(71)Applicant : **KURATOMI TATSURO**(22)Date of filing : **05.12.1978**(72)Inventor : **KURATOMI TATSURO****(54) CUBIC SYSTEM BORON NITRIDE SOLIDIFIED BODY AND MANUFACTURE THEREOF**

(57)Abstract:

PURPOSE: To enhance the performance of a product cubic system boron nitride solidified body as well as to enhance the sinterability of cubic system boron nitride of 10 μ or less by adding metal particles to the boron nitride as a principal constituent and alumina as an auxiliary constituent reduced to ultra fine particles of 1 μ or less, followed by sintering.

CONSTITUTION: 40W92wt% of cubic system boron nitride fine particles of 10 μ or less in diameter is mixed with 40W5wt% of Al₂O₃ ultra fine particles of 1 μ or less in diameter and 20W3wt% of one or more out of Ti, Fe, Si, Al, etc. of 5 μ or less in diameter as a binder. This raw material mixt. is filled in a container, placed in a high temp. high press. chamber, and sintered at a temp. of 1200W1800°C under a press. in the range of the equilibrium press. on the phase equilibrium press. curve of cubic system boron nitride and hexagonal system boron nitride corresponding to the temp. to 60000kg/cm². After the sintering, the heating is stopped while holding the high press., and the sintered product is cooled with water. The press. is then reduced, and the product is taken out.

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